Simon Kwong

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Education

University of California Santa Cruz — Santa Cruz, CA
Bachelor of Science in Computer Science — *Aug. 2020 – June 2024*

Relevant Coursework: Computational Models, Computer Architecture, Probability and Statistics for Engineers, Analysis of Algorithms, Data Analysis and Empirical Methods, Principles of Computer System Designs, Artificial Intelligence, Database Systems, Fullstack Web Development

Experience

Tutor — January 2023 – June 2024
University of California Santa Cruz — *Santa Cruz, CA*

- Helped students develop an understanding of basic data structures and algorithms
- Taught students how to debug code and write unit tests

Grader — January 2023 – June 2024
University of California Santa Cruz — *Santa Cruz, CA*

- Assisted in grading programming assignments and exams of a large scale class of upwards of 400 students
- Assisted in proctoring exams of large scales classes

Projects

UCSC-Amazon | *Node, Express, React, Postgres* — April 2024 – June 2024

- Developed an e-Commerce site inspired by Amazon with 5 other people.
- Created and integrated RESTful APIs and GraphQL for seamless communication between the frontend and backend systems
- Developed and maintained server-side logic with Node and integrated with PostgreSQL
- Implemented secure payment processing using Stripe to facilitate online transactions.

Multithreaded HTTP Server | *C, HTTP Requests* — May 2023 – June 2023

- Developed a multithreaded httpserver in C with a thread safe queue.
- The httpserver is able to handle multiple concurrent GET and PUT requests

K-Kash | *Kotlin, SQL, Git* — April 2023 – June 2023

- K-Kash is a project to help users keep track of their expenses
- Uses the Plaid API to pull user transactions from their bank
- Worked on the backend with regards to user login/registration, data storage/retrieval

Huffman Coding | *C* — January 2022 – March 2022

- Developed an implementation of Huffman Coding done in C.
- Able to encode/decode input from stdin & files and output to stdout or an output file.

Schmidt-Samoa Cryptosystem | *Python* — January 2025

- Developed an implementation of the Schmidt-Samoa Cryptosystem in Python.
- Able to encrypt and decrypt files with generated private and public keys.

Technical Skills

Languages: Python, C/C++, SQL (Postgres), JavaScript/Typescript, HTML/CSS
Frameworks: Node.js, React, Express, NextJS
Developer Tools: Git, Docker, Postman, Vim, Bash, Unix